

1 **CLAIMS**

2 What is claimed is:

- 3 1. A method comprising:

4 generating from a vehicle-based network server a browsable network
5 document including vehicle system data from one or more vehicle systems;

6 providing the browsable network document over a network to enable
7 remote viewing of the vehicle system data.

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- 10 2. A method as recited in claim 1 further comprising collecting vehicle
11 system data from one or more independent vehicle systems in a vehicle, each of
12 the independent vehicle systems generating a distinct type of vehicle system data.

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15 3. A method as recited in claim 1 further comprising transmitting the
16 network document over a network.

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19 4. A method as recited in claim 1 further comprising receiving a
20 network request for the vehicle system data.

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23 5. A method as recited in claim 1 further comprising relating vehicle
24 system data from a first independent vehicle system to vehicle system data from a

1 second independent vehicle system, each of the first independent vehicle system
2 and the second independent vehicle system generating distinct vehicle system data.

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4 6. A method as recited in claim 1 further comprising displaying a web
5 page based on the browsable network document.

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7 7. A method as recited in claim 1 wherein the generating step
8 comprises generating a network document having an embedded object.

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10 8. A method as recited in claim 1 wherein the generating step
11 comprises populating a mark-up language document with the vehicle system data.

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13 9. A method as recited in claim 1 wherein the generating step
14 comprises creating an active server pages web page.

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16 10. A method as recited in claim 2 wherein the collecting operation
17 comprises gathering vehicle system data from at least one of an on-board
18 diagnostic (OBD) system, a global positioning system (GPS), a vehicle video
19 system, a vehicle security system, and an obstacle detection system.

1 11. A method as recited in claim 10 further comprising using the OBD
2 system data and the GPS data to generate a map including a mark at a geographic
3 location where an OBD event occurred.

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5 12. A method as recited in claim 1 further comprising receiving vehicle
6 system configuration information to configure one or more of the vehicle systems.

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9 13. A method as recited in claim 12 wherein the receiving operation
10 comprises receiving at least one of vehicle user profile data, media data, vehicle
11 diagnostics data, map data, and geographic information system data.

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14 14. A method as recited in claim 12 wherein the receiving operation
15 comprises receiving the vehicle system configuration information from a remote
16 client.

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19 15. A method as recited in claim 2 further comprising storing the vehicle
20 system data in a relational database.

1 16. A method comprising:

2 generating a user interface from a vehicle-based server, the user interface

3 enabling a client to access data in the vehicle-based server; and

4 transmitting the user interface from the vehicle-based server over a network

5 to the client.

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7 17. A method as recited in claim 16 further comprising receiving a

8 request for vehicle system data from the client.

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10 18. A method as recited in claim 16 further comprising receiving vehicle

11 system configuration data from the client.

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13 19. A method as recited in claim 16 further comprising collecting

14 vehicle system data from a plurality of vehicle systems.

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16 20. A method as recited in claim 16 further comprising storing a

17 plurality of vehicle system data in a relational database in the vehicle-based server.

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19 21. A method as recited in claim 16 further comprising:

20 collecting vehicle system data from two or more independent vehicle

21 systems;

1 generating a web page including the vehicle system data; and

2 transmitting the web page from the vehicle-based server.

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4 22. A method as recited in claim 21 wherein the transmitting operation

5 comprises transmitting the web page according to a hypertext transport protocol

6 (HTTP).

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1 23. A computer-readable medium having stored thereon computer-
2 executable instructions for performing a computer process comprising:

3 collecting vehicle system data from two or more vehicle systems in a
4 vehicle;

5 generating a web page including the vehicle system data from a vehicle-
6 based web server.

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9 24. A computer-readable medium as recited in claim 23, the process
10 further comprising transmitting the browsable network document over a network.

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12 25. A computer-readable medium as recited in claim 23, the process
13 further comprising receiving a network request for a subset of the vehicle system
14 data.

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17 26. A computer-readable medium as recited in claim 23, the process
18 further comprising relating vehicle system data from a first independent vehicle
19 system to vehicle system data from a second independent vehicle system.

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22 27. A computer-readable medium as recited in claim 23 wherein the
23 generating operation comprises creating a hypertext markup language (HTML)
24 document.

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2 28. A computer-readable medium as recited in claim 23 wherein the
3 generating step comprises generating a web page having an embedded object.

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5 29. A computer-readable medium as recited in claim 23 wherein the
6 generating step comprises creating an active server pages (ASP) web page.
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9 30. A computer-readable medium as recited in claim 23 wherein the
10 collecting operation comprises retrieving vehicle system data from at least one of
11 an on-board diagnostic (OBD) system, a global positioning system (GPS), a
12 vehicle video system, a vehicle security system, and an obstacle detection system.
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15 31. A computer-readable medium as recited in claim 30, the process
16 further comprising using the OBD system data and the GPS data to generate a map
17 including a mark at a geographic location on the map where an OBD event
18 occurred.
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21 32. A computer-readable medium as recited in claim 23, the process
22 further comprising receiving by the vehicle-based server, vehicle system
23 configuration information to configure a vehicle system.
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1 33. A computer-readable medium as recited in claim 32 wherein the
2 receiving operation comprises receiving at least one of vehicle user profile data,
3 media data, map data, and Geographic Information System (GIS) data.

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5 34. A computer-readable medium as recited in claim 23 wherein the
6 collecting operation comprises storing the vehicle system data in a relational
7 database.

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1 35. A vehicle comprising:

2 a web server operable to gather vehicle system data from one or more
3 independent vehicle systems in the vehicle and generate a browsable network
4 document including the vehicle system data.

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6 36. A vehicle as recited in claim 35, wherein the web server comprises a
7 network transmitter transmitting the browsable network document over a network.

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10 37. A vehicle as recited in claim 35, wherein the web server comprises a
11 network receiver receiving a network request for a subset of the vehicle system
12 data.

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15 38. A vehicle as recited in claim 35, wherein the web server comprises
16 processor-executable code that cause a processor to relate vehicle system data from
17 a first vehicle system to vehicle system data from a second vehicle system.

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20 39. A vehicle as recited in claim 35, wherein the browsable network
21 document comprises a hypertext markup language document.

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24 40. A vehicle as recited in claim 35, wherein the browsable network
25 document includes an embedded object.

1 41. A vehicle as recited in claim 35 further comprising two or more of:
2 an on-board diagnostics (OBD) system;
3 a global positioning system (GPS);
4 a vehicle video source;
5 a vehicle security system; and
6 an obstacle detection system, wherein the OBD system, the GPS system, the
7 vehicle video source, the vehicle security system, and the obstacle detection system
8 are in communication with the web server.
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11 42. A vehicle as recited in claim 35 further comprising a relational
12 database storing data from the OBD system, the GPS system, the vehicle video
13 source, the vehicle security system, and the obstacle detection system.
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16 43. A vehicle as recited in claim 35, the web server further operable to
17 configure one or more of the vehicle systems using vehicle system configuration
18 data received from a remote client.
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21 44. A vehicle as recited in claim 35, wherein the web server further
22 comprises an encryption module operable to encrypt the browsable network
23 document.
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1 45. A vehicle-based system comprising:

2 a plurality of vehicle system interfaces collecting vehicle system data from
3 two or more vehicle systems in a vehicle;

4 a web server generating a web page including the vehicle system data from
5 plurality of vehicle system interfaces.

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8 46. A vehicle-based system as recited in claim 45 further comprising a
9 network transmitter transmitting the web page over a network according to a
10 network protocol.

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12 47. A vehicle-based system as recited in claim 45 further comprising a
13 network receiver receiving a network request for a subset of the vehicle system
14 data.

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17 48. A vehicle-based system as recited in claim 45 further comprising a
18 vehicle data management module relating vehicle system data from a first
19 independent vehicle system to vehicle system data from a second independent
20 vehicle system.

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23 49. A vehicle-based system as recited in claim 45 wherein the web page
24 comprises a hypertext markup language (HTML) document.

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2 50. A vehicle-based system as recited in claim 45 wherein the web page
3 includes an embedded object.
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5 51. A vehicle-based system as recited in claim 45 wherein the web page
6 comprises an active server pages (ASP) web page.
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9 52. A vehicle-based system as recited in claim 45 wherein the plurality
10 of vehicle system interfaces comprise at least one of an on-board diagnostic (OBD)
11 system, a global positioning system (GPS), a vehicle video system, a vehicle
12 security system, and an obstacle detection system.
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15 53. A vehicle-based system as recited in claim 45 further comprising a
16 relational database operable to create relations among vehicle system data from the
17 plurality of vehicle system interfaces.
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1 54. A vehicle-based computer-readable memory having a vehicle system
2 data structure, the data structure comprising:
3 an on-board diagnostics (OBD) code field containing an OBD code logged
4 during vehicle operation;
5 a vehicle location field containing data representing the vehicle location;
6 and
7 a timestamp field containing data representing the time of the vehicle
8 location and the OBD code, wherein the timestamp enables a computer to display
9 an OBD symbol and the vehicle location on a web-browsable map.
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1 55. A vehicle-based computer comprising:

2 a plurality of vehicle system interfaces receiving vehicle system data from a

3 plurality of independent vehicle systems in a vehicle; and

4 means for generating a web page including vehicle system data from at least

5 one of the plurality of independent vehicle systems in the vehicle.

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7 56. A vehicle-based computer as recited in claim 55 wherein the means

8 for generating comprises a vehicle-based web server.

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10 57. A vehicle-based computer as recited in claim 55 wherein the means

11 for generating comprises:

12 a vehicle-based web server; and

13 a runtime engine in communication with the server and operable to generate

14 the web page.

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